

New York State Department of Transportation

Red Flag NB2358W013

By: Alex Abreu

Flag Date: May 30, 2023

Superseding Information:

This flag supersedes: YF NB2222W004

Structure Information

BIN: 1065318

Feature Carried: 278I278IX2M23027

Feature Crossed: 6TH AVENUE

Orientation: 8 - NORTHWEST

Region: 11 - NEW YORK CITY

County: KINGS

Political Unit: City of NEW YORK

Approximate Year Built: 1962

Posted Load Matches Inventory : Yes

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 322

Verbal Notification Information

Person Notified: Muhammad Mubeen

Date: May 30, 2023 3:25:00 PM

Of: NYSDOT Region 11

Signature Information

Signature: Alex Abreu, P.E. 099761-1

Date: June 01, 2023

Reviewed By: Robert Kemp

Date: June 01, 2023

Attachments: 10

Flagged Elements

Parent Element	Element	Total Quantity	Unit
Span Number : 247			
	107 - Steel Open Girder/Beam	989	ft
	PR831 - Steel Beam End	42	each

Flagged Condition Description

This Red Flag No. NB2358W013 is located at the same location as previously issued Yellow Flag No. NB2222W004.

Location: Span 247, Girder G19 at Pier 247

Description: The right connection angle at Girder G19 to the pier cap at Pier 247 exhibits a full height vertical corrosion crack for 1/4"-3/4" wide in the fillet section (previously noted to be 5" H x 3/4" W vertical corrosion crack at the lower fillet section and an 8.25" H x 3/4" W vertical corrosion crack at the upper fillet section with 90% section loss for the remaining 1.25" of the connection angle height). (Photo 5)

The left stiffener connection angle exhibits a corrosion crack measuring 2-1/4"H x 1/2"W (previously noted to be 2" long) followed by 2-3/4" long vertical crack (previously noted to be 2-1/2" long) at upper portion of fillet (Photo 7). Additionally, there is a 3-1/2"H x 1/2"W corrosion crack followed by 2" long vertical crack (previously noted to be 5" long corrosion crack) at lower portion of fillet (Photo 8). The remaining fillet area of the connection angle between the two cracks is approximately 4" high and exhibits up to 50% section loss (Photo 9). The remaining height of the stiffener connection angle below the girder exhibits up to 30% section loss for the bottom 3" high for the full width (Photo 10).

There have been changes since the previous inspection resulting in the flagged condition elevating to Red Flag.

Notes:

1. The affected member, Girder G19 is a load path redundant steel girder consisting of a web depth of 19.5" inches and thickness of 0.606 inches and is located under the deck in the roadway, approximately 12" off the edge of curb line/safety walk. All dimensions were measured in the field. Steel reinforcement plates were previously installed at the girder web which are in generally good condition with moderate corrosion.
2. The adjacent Girder G18, is 5'-5" on center, has repair plates and is in good condition.
3. The adjacent Stringer S2, approximately 24" on center, acts as a support for the railing and curb area above. The web of the stringer exhibits up to 15% section loss along the connection angle. The bottom flange exhibits 3" L x 2" W corrosion hole in the left angle with up to 40% section loss surrounding the hole for 1' long section.
4. Dye Penetrant testing was used to determine the limits of the cracks.
5. A double left lane closure on 3rd Avenue Eastbound between 22nd and 23rd streets with 35' bucket truck is required to access the flagged location.

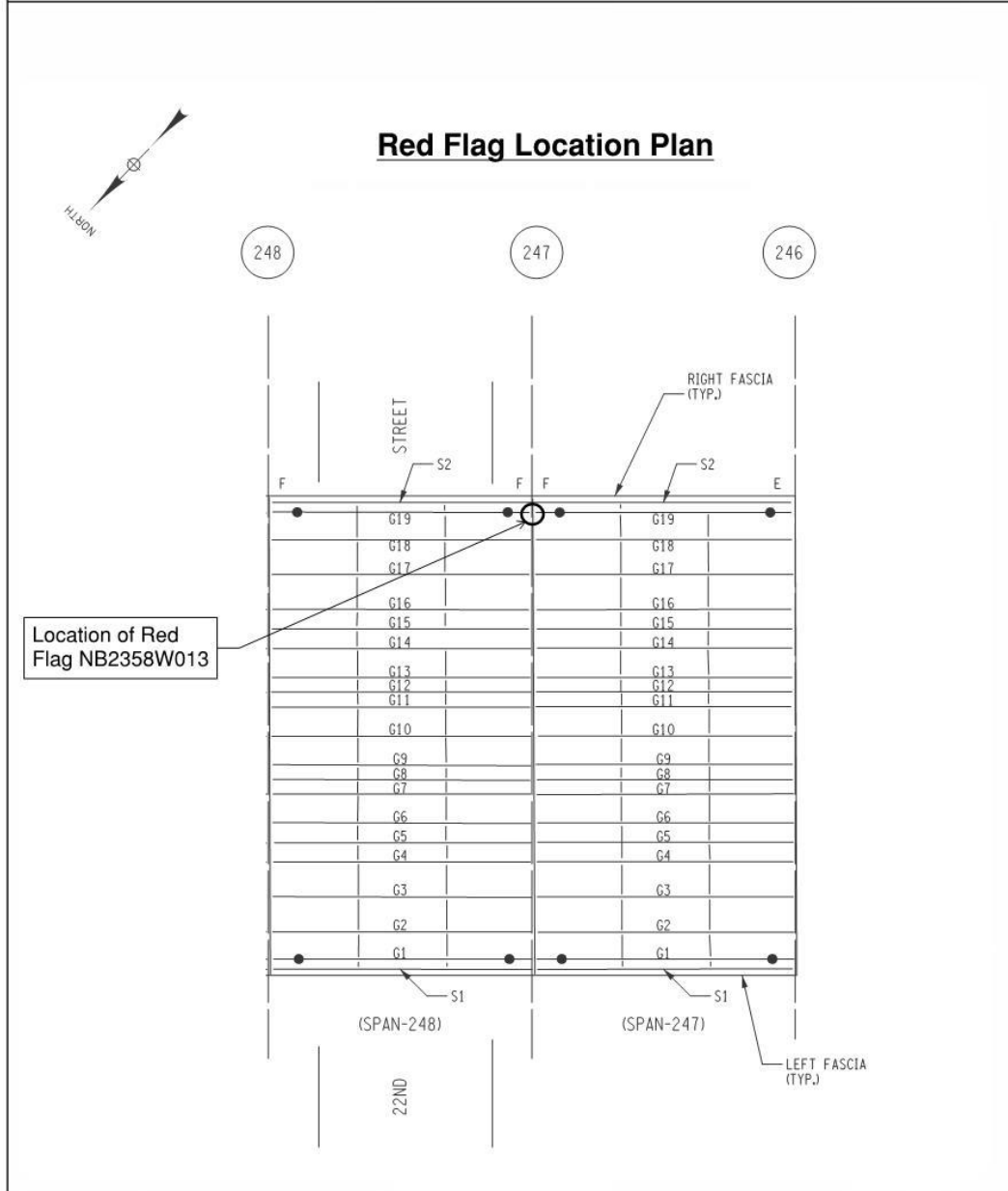
Flag PhotographsPhoto Number: **1**Photo Filename: **23_Flag Location Plan.jpg**Gowanus Expressway
2023 Biennial Inspection - Field SketchBIN: 1065318Team: AA/TSDate: 05/30/2023Span: 247Location: Girder G19 at Pier 247**Attachment Description: Flag Location Plan**

Photo Number: 2

Photo Filename: 23_Span 247_Pier 247_Girder G19_Connection

Gowanus Expressway
2023 Biennial Inspection - Field Sketch

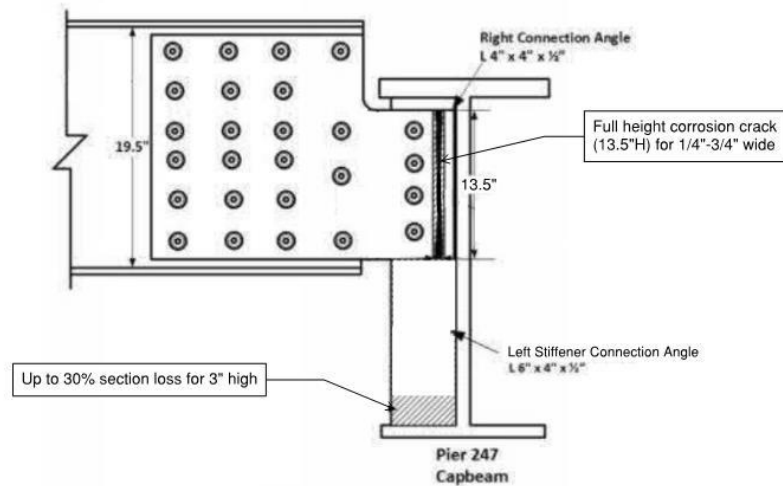
BIN: 1065318

Team: AA/TS

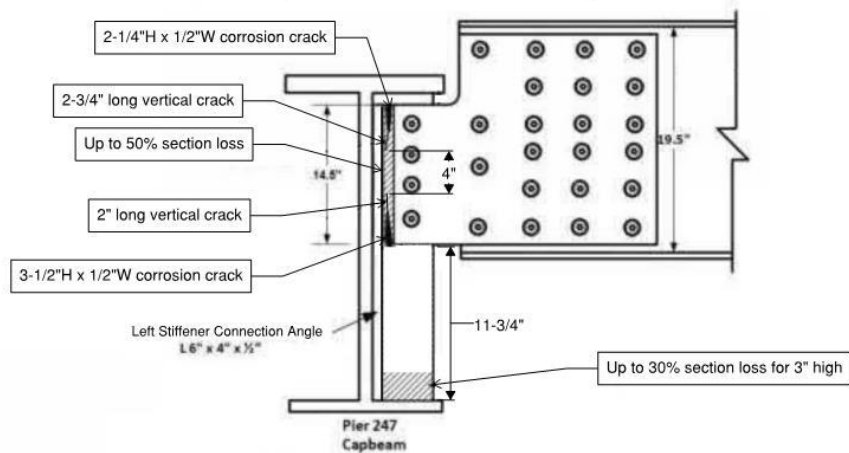
Date: 05/30/2023

Span: 247

Location: Girder G19 at Pier 247

Right Face of Girder G19

SCALE: N.T.S

Left Face of Girder G19

SCALE: N.T.S

Notes:

-As-measured web thickness is approximately 0.606"

wsp

Attachment Description: Flag Condition Sketch

Photo Number: 3

Photo Filename: 23_113_7354.JPG



Attachment Description: General view of the flagged condition at Girder G19 in Span 247 at Pier 247. Looking End.

Photo Number: 4

Photo Filename: 23_113_7330.JPG



Attachment Description: Close up general view of the right face of Girder G19 in Span 247 at Pier 247. Looking End-Left.

Photo Number: 5

Photo Filename: 23_113_7327.JPG



Attachment Description: The right face of Girder G19 in Span 247 at Pier 247. The right connection angle exhibits full height vertical corrosion crack for 1/4"-3/4" wide in the fillet section. Looking Left.

Photo Number: 6

Photo Filename: 23_113_7347.JPG



Attachment Description: Close up general view of the left face of Girder G19 in Span 247 at Pier 247. Looking Right.

Photo Number: 7

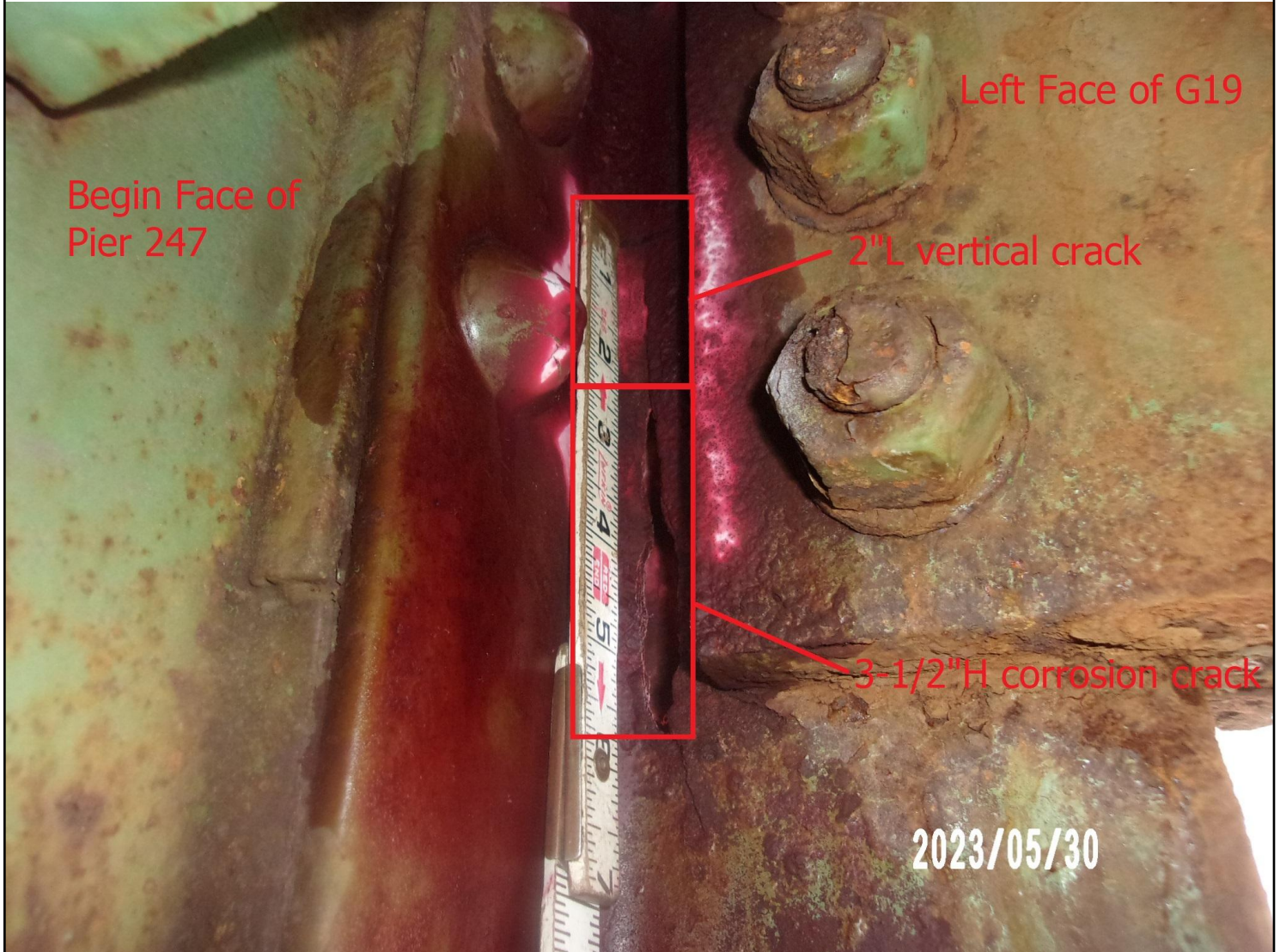
Photo Filename: 23_113_7341.JPG



Attachment Description: The left face of Girder G19 in Span 247 at Pier 247. The left connection angle exhibits 2-1/4"H x 1/2"W corrosion crack followed by a 2-3/4" long vertical crack at the upper fillet section. Looking Right.

Photo Number: 8

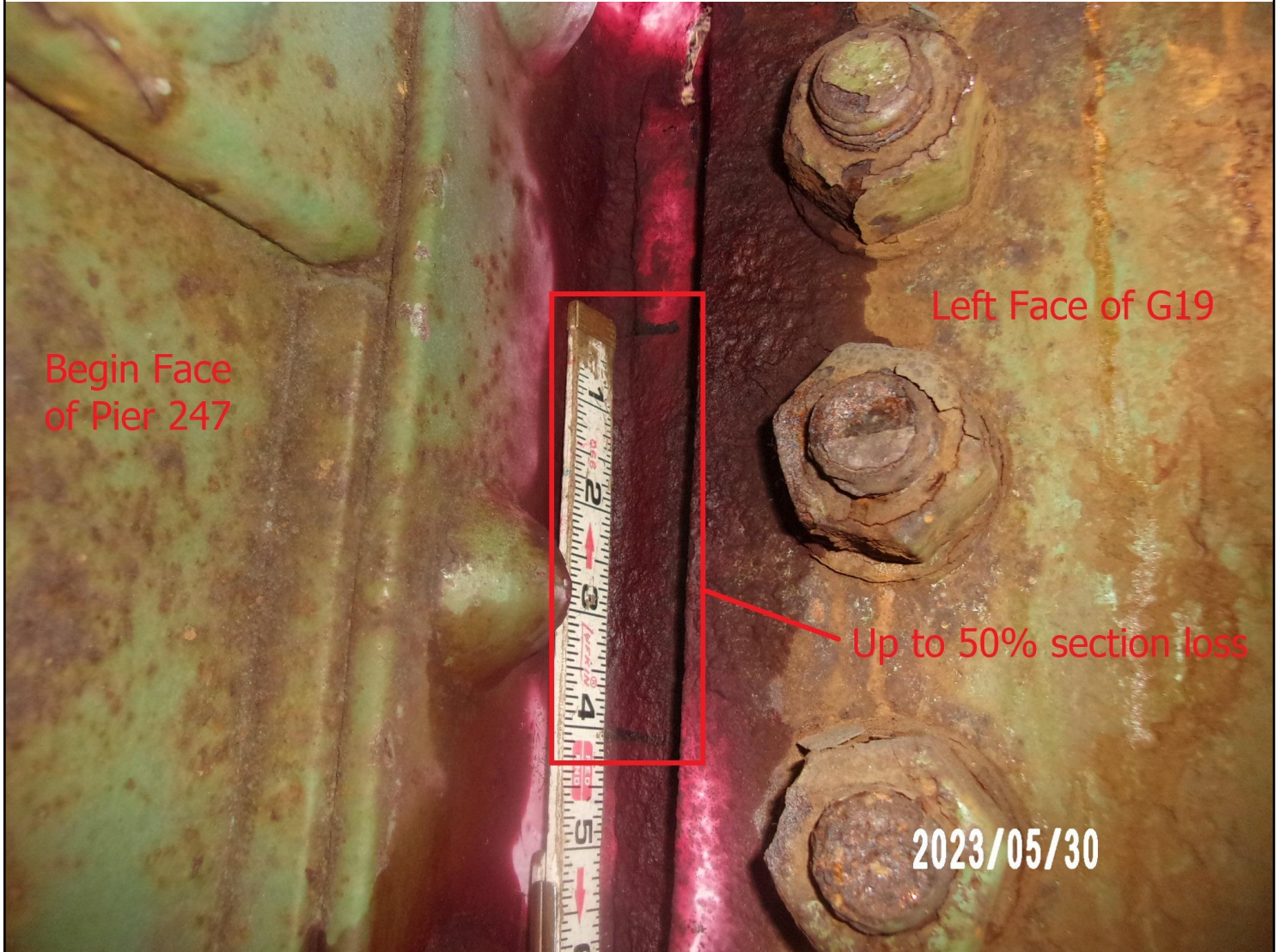
Photo Filename: 23_113_7334.JPG



Attachment Description: The left face of Girder G19 in Span 247 at Pier 247. The left connection angle exhibits 3-1/2"H x 1/2"W corrosion crack followed by a 2" long vertical crack at the lower fillet section. Looking Right.

Photo Number: 9

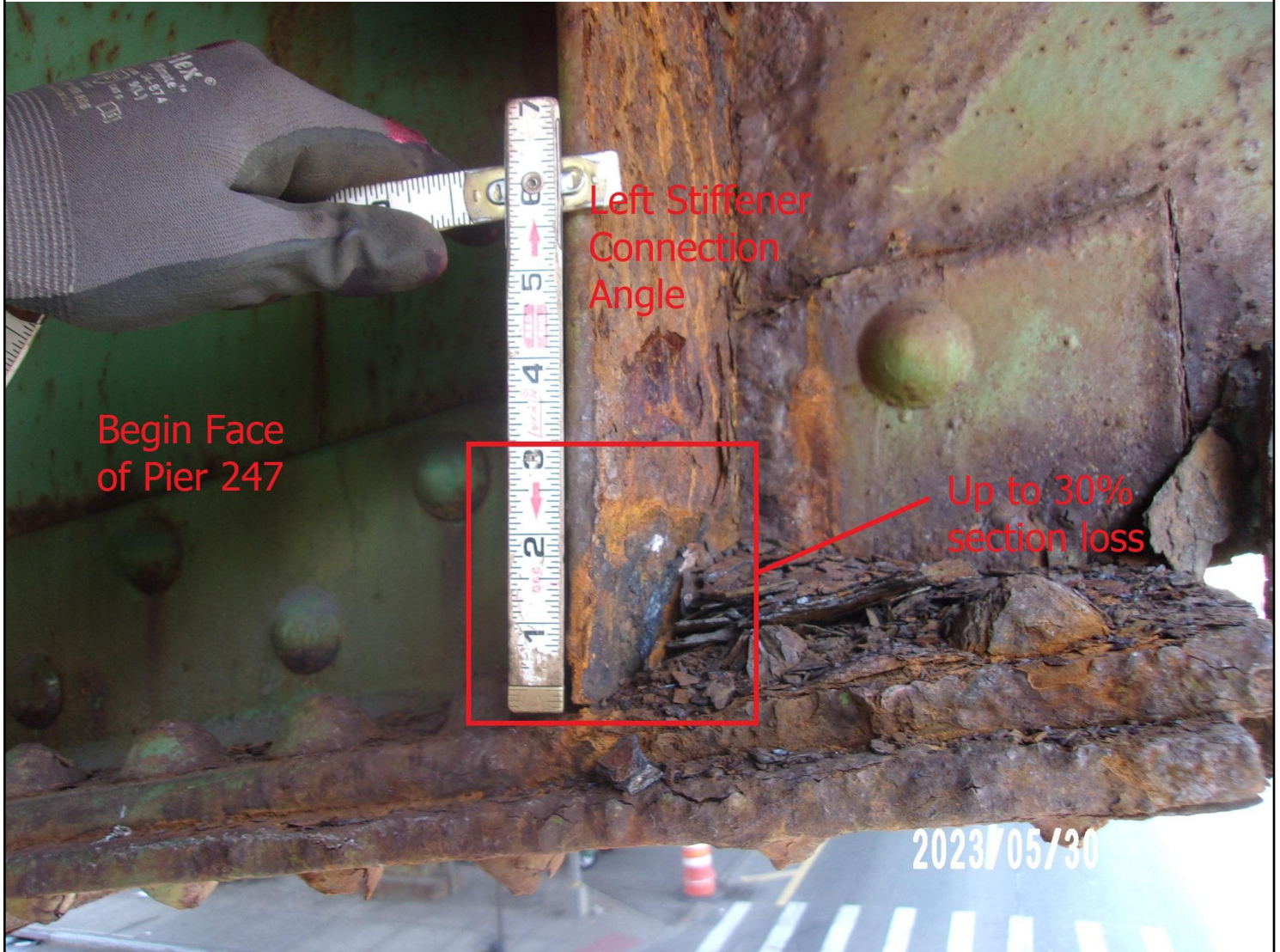
Photo Filename: 23_113_7344.JPG



Attachment Description: The left face of Girder G19 in Span 247 at Pier 247. The left connection angle exhibits up to 50% section loss in the fillet section between the cracks at the top and bottom of the angle. Looking Right.

Photo Number: 10

Photo Filename: 23_113_7351.JPG



Attachment Description: The base of Girder G19 left stiffener connection angle in Span 247 at Pier 247. The bottom of the stiffener connection angle exhibits up to 30% section loss for 3" high. Looking End.